Workbench Utilities

Worksheet

Summary

This is a walk-though of functionality available in the Workbench Utilities, primarily covering reference set development, review and release.

The document has been created to allow a user to walk through available functionality without any prior experience of SNOMED CT, reference sets or previous versions of the Workbench Utilities. The guide is meant to be worked through sequentially, as each example builds on previous examples; it's not recommended to start the guide halfway through, even if a user is reasonably proficient in functionality provided by the Utilities.

A user will gain most from working through this guide while trying each example on an installation of the Workbench Utilities. However, enough screen-shots have been provided to give a flavour of the available functionality by simply reading the guide.

The Workbench Utilities can be installed in stand-alone mode using the one-page installation instructions and installation directory provided separately to this guide.

I hope this walkthrough is useful and enjoyable. Please provide any feedback to jgu@ihtsdo.org.

Contents

Starting the Workbench Utilities	2
Creating and Releasing a Simple Reference Set	3
Updating an Existing Reference Set	7
Searching and Browsing for Concepts	11
Reference Set Chaining	18
More complex Specifications	20
Releasing Multiple Reference Sets at one Time	22
Tracking History	24
Support for Roles, Organisations, Collaboration and Sharing	25
Reviewing Reference Sets	30
	Starting the Workbench Utilities Creating and Releasing a Simple Reference Set Updating an Existing Reference Set Searching and Browsing for Concepts Reference Set Chaining More complex Specifications Releasing Multiple Reference Sets at one Time Tracking History Support for Roles, Organisations, Collaboration and Sharing Reviewing Reference Sets

1. Starting the Workbench Utilities

This section describes how to start-up and login to the Workbench Utilities.

- Start the Workbench Utilities by double clicking on the 'Sct Broswer' icon on the desktop. Only do this once, otherwise you will start two sessions. The Utilities take about one minute to start up and load the RF2 files.
- The following login screen will appear. Click on the down-arrow icon on the User field and select 'Admin IHTSDO', enter 'Admin' as the password and click on the Login button.

🖳 login	
User Password	Admin IHTSDO 👻
Login	Cancel

• The 'RefSet Maintenance' screen will then be displayed:

ters All refsets	-	All Statuses	, Definition	Design Assign R	eviewers	Perform Review	Assess feedback	History	
Reference Sets	Status	s Deadline	1						
				Name					
				Description					
				Description					
				-					
				Refset Id					
				Module Id					
				Status					
			R	eview deadline	10 Oct	ober 2012 👻			
			L	ast review date					
				Review Type			v		
			Rele	ase distribution	Organis	ation only	-		
				Release date					
				Owner		_			
	D-()			Author		T			
Add	Refresh			Version	0.1				

2. Creating and Releasing a Simple Reference Set

This section describes how to define a reference set, specify which concept members to include, and how to produce RF2 release files for the reference set.

- Click on the 'Add' button. This creates a reference set.
- Modify the 'Name' to 'my first refset', and the 'Refset Id' field to '1200024'.
- Click on the 'Save' button.

Filters All refsets	→ Ali	Statuses 👻	Definition Design Assign F	Reviewers Perform Review Assess feedback History
Reference Sets	Status	Deadline		
my first refset	Defining	10 days	Name	my first refset
			Description	
			Refset Id	NotSet
			Module Id	
			Status	Defining
			Review deadline	20 October 2012 -
			Last review date	
			Review Type	Collaborative Review
			Release distribution Release date	Organisation only
			Owner	Admin IHTSDO (IHTSDO)
			Author	Admin IHTSDO V (IHTSDO)
Add	Refresh	Delete	Version	0.1
Author A	pproved	Retire	Save Cance	vel
		Logout		

• The reference set is currently in its 'Defining' stage (where the owner of the reference set can add a description and other defining information). To move on to author the reference set, click on the 'Author' button, and then select the 'Design' tab at the top of the screen.

		adline days Compute Insert Help B- SNOMED CT Model Component B- Record atfact D- Organism Computed refsets Ty	Гуре
my first refset Aut	uthoring 10	Compute Insert Help B-SNOMED CT Model Component Computed refsets Ty Computed refsets Ty	уре
		SNOMED CT Model Component Computed refsets Ty	уре
		E ⊕- Clinical finding	
Add		B - Pharmaceutical / biologic product B - Special concept Cobservable entity B - Qualifier value B - Physical force	
Review Retire		lete → Procedure elease Save Toggle In Search for Insert	

- We will now create a simple reference set specification, including all concepts in the 'Chromista' sub-hierarchy.
- With the cursor in the top right design window, right click to bring up a selection menu. Select 'DescendentAndSelf(a)' from the menu to insert that text into the design window at the current cursor position.
- Now, double click on the 'a' within the brackets so that it's highlighted.
- In the taxonomy view, open the 'Organism' sub-hierarchy by clicking on the '+' symbol to its left, and select 'Chromista'. Then click on the 'Insert' button below the taxonomy window to insert this concept into the design window. As we previously highlighted the 'a', this should be replaced by the concept identifier, as shown below:

ilters All refsets	👻 Al S	Statuses 🛛 👻	Definition Design Assign Reviewers Perform Review Assess feedback History	
Reference Sets	Status	Deadline	DescendantsAndSelf(426785004 Chromista)	
my first refset	Authoring	10 days	DescendantsAndsen(420763004 Chiomista)	
			Compute Insert Help → Record artifact Computed refsets	Туре
Add	Refresh	Delete	Microorganism Clinical finding	
Review	Retire	For Release	Save Toggle In Search for Insert	
Define	ſ	Logout	Cancel Toggle Out Insert Inclusions Browse	

• We can now compute and review the reference set members. To do this, click on the 'Compute' button. The active tab will automatically switch to 'Perform review' and the following screen will be shown (if a different layout is shown, click on the 'Search Options' button, and select 'Tree with all levels shown', under 'Layout of Results'):

ers All refsets	✓ All Statuse	es 👻 Definition Design	ssign Reviewers Perform Review Assess feedback	History
ference Sets	Status Dea	adline Enter Search String	Search	Search Options 10 Matches found. 10 in refset.
r first refset	Authoring 10	days Search Results	Sct Id Description	
		Tree View	426619009 Oomycota	
			425489001 Sphaerita	
			426785004 Chromista	
			427364009 Oomycetes	
			87165007 Branchiomyces	
			425665003 Saprolegniales	
			425962002 Rozellopsidales	
			426159006 Pseudosphaeritaceae	
			55978002 Branchiomyces demigrams	
			88871001 Branchiomyces sanguinis	
		Synonyms		
Add Re	efresh De	elete		
Review R	etire For R	elease	Browse	
			Browse	

- The top right window shows all members of the reference set. The reference set is now ready for release.
- Click on the 'For Release' button to change the status of the reference to 'Ready'. Then click on the 'Approved' button to move the status of the reference set on to 'Approved'. Finally, click on the 'Release' button to bring up the 'Release Options' screen. This three stage process allows an author to mark a reference set as ready before an owner approves it for an administrator to create the release files. As we're logged in as an administrator, we're performing all three steps in one go.

🖳 ReleaseOptions			
Release Type	Final Release 🔻		
Release Date	27 September 2012		
Country	US		
Namespace	1234567		
Default Module Id	7654321		
Release Directory	C:\Users\John\Documents\Visual Studio	2005\Projects\SCT Browser2\SCT Browser\SC	T Browser\bin\Debug\release Change
Last Release Date	26 September 2012		
Release Filename		Last Filename	Status
der2_Refset_myfirst	rrefsetSnapshot_ES1234567_20120927.txt		
Check Names	Test Release Final Release C	lose	

• This screen allows an administrator to manage the release process for one or more reference sets. Click on the 'Final Release' button to produce the RF2 release files for the reference set. The status of the reference set should change to 'Released OK'.

🖳 ReleaseOptions			
Release Type	Final Release 🔻		
Release Date	28 September 2012		
Country	US		
Namespace	1234567		
Default Module Id	7654321		
Release Directory	C:\Users\John\Documents\Visual Studio 2005\F	Projects\SCT Browser2\SCT Browser\SCT Browser\bin\Debug\release	e Change
Last Release Date	27 September 2012		
Release Filename		Last Filename	Status
der2_Refset_myfirst	refsetSnapshot_US1234567_20120927.txt		Released OK
Check Names	Test Release Final Release Close		

- Now close the 'Release Options' window, highlight 'my first refset' in the reference set browser to the left of the screen, and select the 'Definition' tab at the top of the screen.
- Note that the version number of the reference set has incremented to '1.0', indicating that the reference set has been released.
- Now navigate to the release folder in Windows Explorer, to see the three release files that were created.

ganize 🔻 Share with 🔻	Burn New folder				II • 🗍
🕻 Favorites 💻 Desktop	Documents library release				Arrange by: Folder 🔻
🚺 Downloads 🔄 Recent Places	Name	Date modified	Туре	Size	
22 necent neces	der2_Refset_myfirstrefsetDelta_US1234567_20120927	10/10/2012 11:59	Text Document	1 KB	
Libraries	der2_Refset_myfirstrefsetFull_US1234567_20120927	10/10/2012 11:59	Text Document	1 KB	
Documents	der2_Refset_myfirstrefsetSnapshot_US1234567_20120927	10/10/2012 11:59	Text Document	1 KB	
Music					
Pictures					
Videos					
Homegroup					
Computer					
🍒 Local Disk (C:)					
퉬 inetpub					
PerfLogs					
Program Files					
Program Files (x86)					
SWSetup					
Users					
퉬 Windows 🝙 Recovery (D:)					
Recovery (D:) HP_TOOLS (E:)					
FIE_TOOLS (E)					
Network					

- The files are named using the information provided in the 'Release Options' screen, and conform to the IHTSDO file naming convention.
- Click on the Snapshot file, to open it. The file conforms to the RF2 specification, contains one record per concept member in the reference set, and looks as follows:

ile Edit Format View Help			
d effectiveTime active modul 1537438-c4c2-4031-a6d2-275714e3b076 395ca9b-dc77-4fc4-84fb-338645d60230 1516e16-2d90-433b-9e3a-5a6b009aa652 77b56f-3381-426f-be66-6da4da032bda f9e5de4-300f-489b-a60d-802d1a06f12a 190a044-908a-44e3-9528-f76f1fa3c7fc 3378200-a884-4580-9f5f-aecb1dc8002e 039c339-611a-406e-992b-53dfded2703a 163c75e-b059-4204-a3d1-f05a72162c19 24f1bf6-c4ea-452d-a9ad-b99ae9364899	eld refsetId 20120927 1 20120927 1	referencedComponentId 7654321 120024 425665003 7654321 1200024 425962002 7654321 1200024 4265159006 7654321 1200024 426619009 7654321 1200024 426785004 7654321 1200024 427364009 7654321 1200024 87165007 7654321 1200024 88871001	

3. Updating an Existing Reference Set

This section describes how to manually add and remove members from a reference set, and how incremental delta, full and snapshot release files can be produced in RF2 format.

- To update a reference set that has already been released, select the reference set in the reference set browser window on the left, and select the 'Maintain' button. This will move the status of the reference set on from 'Released' to 'Defining'. Do this now with 'my first refset'.
- Note that the version number of the reference set has incremented to '1.1'.
- Click the 'Author' button and select the 'Design' tab to start amendment of the reference set.
- We will now manually add and remove individual concepts from the reference set.
- Expand the 'Organisms hierarchy'. Select 'Chromista' and click on the 'Toggle Out' button, to remove this concept from the reference set.
- Select 'Kingdom Animalia' and click on the 'Toggle In' button to include this concept in the reference set. Also include the 'Kingdom Plantae' concept.

Iters All refsets	✓ AII S	itatuses 👻	Definition Design Assign Reviewers Perform Review Assess feedback History	
Reference Sets	Status	Deadline	DescendantsAndSelf(426785004 Chromista)	
ny first refset	Authoring	10 days		
			Compute Insert Help	Туре
			Trophic life form Life-cycle form Life-cycle form Life-cycle form	

• Now compute the reference set, and note that the removed items are not present and the added items are in the list.

Filters All refsets	•	All Statuses 👻	Definition Design A	ssign Reviewers	Perform Review	Assess feedback	History	
Reference Sets	Status	Deadline	Enter Search String			Search	Search Options	11 Matches found. 11 in refset.
my first refset	Author	ring 10 days	Search Results	Sct Id	Description			
			Tree View	426619009 425489001 427364009 87165007 425665003 31006001 425962002 387961004 426159006 55978002	Oomycota Sphaerita Oomycetes Branchiomyces Saprolegniales Kingdom Planta Rozellopsidales Kingdom Anima Pseudosphaerit Branchiomyces	ae 3 Jia taceae		E
Add	Refresh Retire	Delete For Release	Synonyms	Browse				

• Select the 'For release' button, select the 'Approved' button, and then select the 'Release' button.

ReleaseOptions			
Release Type	Final Release 🔻		
Release Date	28 September 2012		
Country	US		
Namespace	1234567		
Default Module Id	7654321		
Release Directory	C:\Users\John\Documents\Visual Studio 2005\	Projects\SCT Browser2\SCT Browser\SCT Browser\bin\Debug\release	e Change
Last Release Date	27 September 2012		
Release Filename		Last Filename	Status
der2_Refset_myfirst	refsetSnapshot_US1234567_20120928.bt	der2_Refset_myfirstrefsetSnapshot_US1234567_20120927.bt	
Check Names	Test Release Gose Close		

- Note that this time, an existing release of this reference set has been identified, and is displayed in the 'Last Filename' column.
- Click on the 'Final Release' button. The Status of the release file should change to 'Released OK'.
- Using Windows Explorer, navigate to the release directory, and view the files. Note that three additional files have been produced:

Favorites	Documents library				Arrange by:	Folder 🔻
Downloads	Name	Date modified	Туре	Size		
Recent Places	der2_Refset_myfirstrefsetDelta_US1234567_20120927	10/10/2012 11:59	Text Document	1 KB		
Libraries	der2_Refset_myfirstrefsetDelta_US1234567_20120928	10/10/2012 13:01	Text Document	1 KB		
Documents	der2_Refset_myfirstrefsetFull_US1234567_20120927	10/10/2012 11:59	Text Document	1 KB		
Music	der2_Refset_myfirstrefsetFull_US1234567_20120928	10/10/2012 13:01	Text Document	2 KB		
Pictures	der2_Refset_myfirstrefsetSnapshot_US1234567_20120927	10/10/2012 12:29	Text Document	1 KB		
Videos	der2_Refset_myfirstrefsetSnapshot_US1234567_20120928	10/10/2012 13:01	Text Document	1 KB		
PerfLogs Program Files Program Files (x86) SWSetup Users Windows Recovery (D:) HP_TOOLS (E:)						
Network						

• Open the delta file and note that only the changed membership records are shown in this file – one removal (with an active field of '0') and two additions (with an active field on '1').

der2_Refset_myfirstrefsetDelta_US1234567_20120928 - N	lotepau		
le Edit Format View Help d effectiveTime active module: lea4528-e882-4688-8c71-1ebe79021449 uaf5cfd-28c1-42f4-b2ab-1c01e742e562 l90a044-9d8a-44e3-9528-f76f1fa3c7fc	Id refsetId 20120928 1 20120928 1 20120928 0	referencedComponentId 7654321 1200024 31006001 7654321 1200024 387961004 7654321 1200024 426785004	

• The full file shows the complete history of membership records, so in this case it shows concept 426785004 (Chromista) twice, once with an active flag of '1', when it was created in the first release, and once with an active flag of '0', as it has been removed in this release.

der2_Refset_myfirstrefsetFull_US1234567_20120928 - N	lotepad		
File Edit Format View Help id effectiveTime active module c1337438-c4c2-4031-a6d2-275714e3b0f6 8395ca9b-dc77-4fc4-84fb-33864560230 91516e16-2309-4350-993a-5a6b009aa652 1a77b56f-3381-426f-be66-6da4da032bda 2f9e5de4-300f-489b-a60d-802d1a06f12a f190a044-9d8a-44e3-9528-f76f1fa3c7fc d9378200-a884-4580-9f5-aecb1dc8002e 8d93c339-611a-406e-992b-55dfde2703a 4163c75e-b059-4204-a3d1-f05a72162c19 6e4f1bf6-c4ea-452a-a9ad-b99ae9364899 84ea4528-e882-4688-8c71-1ebe79021449 2aaf5cfd-28c1-42f4-b2ab-1c01e742e562 f190a044-9d8a-44e3-9528-f76f1fa3c7fc	IId refsetId 20120927 1 20120927 1 20120927 1 20120927 1 20120927 1 20120927 1 20120927 1 20120927 1 20120927 1 20120927 1 20120928 1 20120928 1 20120928 0	referencedComponentId 7654321 1200024 425489001 7654321 1200024 425665003 7654321 1200024 42565003 7654321 1200024 426159006 7654321 1200024 426619009 7654321 1200024 427364009 7654321 1200024 52788002 7654321 1200024 5378002 7654321 1200024 8871001 7654321 1200024 887961004 7654321 1200024 426785004	

• The Snapshot file contains the most recent membership record for each concept. Note that it does contain the two new added concepts, but only one (inactive) record for Chromista - the concept we removed.

File Edit Format View Help id effectiveTime active moduleId refsetId referencedComponentId 61337438-c462-4031-a6d2-275714e3b076 20120927 1 7654321 1200024 425665003 8395ca9b-dc77-4fc4-84fb-338645d60230 20120927 1 7654321 1200024 425662002 1a77b56f-3381-426f-be66-6da4da32bda 20120927 1 7654321 1200024 425619006 279e5de4-300f-489b-ea0d-802d1a06f12a 20120927 1 7654321 1200024 42619909 d378200-a884-4580-9f5f-aecb1dc8002e 20120927 1 7654321 1200024 42619909 d378200-a884-4580-9f5f-aecb1dc8002e 20120927 1 7654321 1200024 425786002 d430235-eb059-4204-a3d1-f05a72162c19 20120927 1 7654321 1200024 45978002 4163c75e-b059-4204-a3d1-f05a72162c19 20120927 1 7654321 1200024 45878002 2426f526-e882-468-8c71-1ebe79021449 20120927 7 7654321 1200024 487861	

• Note that the version number of 'my first refset' is now '2.0', and its status is 'Released', indicating this is the second release of the reference set.

4. Searching and Browsing for Concepts

This section describes how to search and browse concepts included in a reference set, as well as how to search and browse for concepts more widely in SNOMED CT.

- Add a new reference set and call it 'Viruses', setting its 'Refset Id' to '1200034'.
- Save the reference set and move it on for authoring (by selecting the 'Author' button), and select the design tab.
- Now enter 'HIV virus' in the field to the right of the 'Search For' button, and then click on the 'Search For' button. The taxonomy shows all hierarchies that contain references to 'HIV virus'.
- Expand the Organisms hierarchy to display the concepts that match the search criteria. Concepts in black are matching concepts, and concepts in grey are ancestors of matching concepts.

ilters All refsets	→ All S	Statuses 👻 🔻	Definition Design	Assign Reviewers	Perform Review	Assess feedb	ack History			
Reference Sets	Status	Deadline								
my first refset	Released	10 days								
Viruses	Authoring	10 days								
			Compute	Insert	Help					
			Compute	Insert	Help					
			- Virus	s	Help			^ C	computed refsets	Туре
				s RNA virus		ep in life-cvcle			computed refsets	Type dynamic
				s	A virus with a DNA st	ep in life-cycle			1.1	
				s RNA virus Enveloped ssRN. 	A virus with a DNA st riridae entivirus	ep in life-cycle			1.1	
				s RNA virus È- Enveloped ssRN. È- Family Retrov È- Genus Le È- Prima	A virus with a DNA st riridae entivirus ste lentivirus group				1.1	••
				s RNA virus È- Enveloped ssRN. È- Family Retrov È- Genus Le È- Prima	A virus with a DNA st riridae antivirus ate lentivirus group Juman immunodeficie	ncy virus			1.1	
				s RNA virus È- Enveloped ssRN. È- Family Retrov È- Genus Le È- Prima	A virus with a DNA st viridae antivirus ste lentivirus group tuman immunodeficie Human immunode	ncy virus ficiency virus typ			1.1	
Add	Refresh	Delete		s RNA virus È- Enveloped ssRN. È- Family Retrov È- Genus Le È- Prima È- F	A virus with a DNA st riridae antivirus ate lentivirus group Juman immunodeficie	ncy virus ficiency virus typ			1.1	
Add Review	Refresh (Delete For Release		s RNA virus È- Enveloped ssRN. È- Family Retrov È- Genus Le È- Prima È- H	A virus with a DNA st viridae antivirus ste lentivirus group tuman immunodeficie Human immunode	ncy virus ficiency virus typ ficiency virus typ			1.1	

• Now 'Toggle In' to the reference set the three matching concepts. Selecting the 'Inclusions' button will show concepts that have been explicitly included in the reference set in list form:

🖳 Ref	set Mainte	nance - logged i	in as 'Admin II	ITSDO' fron	n organis	ation 'IHTSDO	r.							8
Filters	All refsets	s 👻 Al	Statuses 🗸	Definition	Design	Assign Review	wers Perform	n Review	Assess fee	dback	History			
Refe	rence Sets	Status	Deadline											
-	rst refset	Released												
Virus	es	Authoring	10 days											
				Com		Insert	Help							
						licitly include			Sct Ident			Computed refsets	Туре	
				Humar	n immunod	leficiency virus leficiency virus t leficiency virus t			1903000 3611500 8929300	06		my first refset	dynamic	
	Add	Refresh	Delete											
Re	eview	Retire	For Release	Sa	ve	Remove	Search for	HIV vi	us			Insert		
D	efine		Logout	Car	ncel		Insert	Excl	usions	Browse				

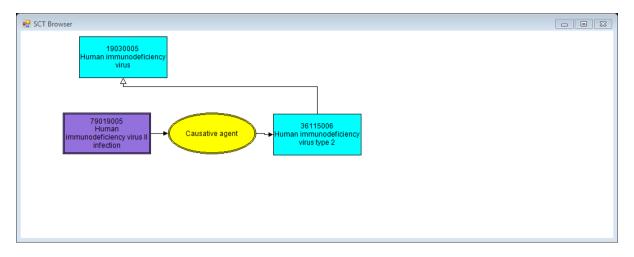
- Click the 'Exclusions' button to show concepts that have been explicitly excluded, and then the 'Tree View' button to get back to the taxonomy view.
- Now select the 'Compute' button to show the reference set members.

Refset Maintenan	ce - logged in	as 'Admin IH	ITSDO' from organisati	on 'IHTSDO'.				c	
Filters All refsets	✓ AII S	Statuses 👻 🔻	Definition Design A	ssign Reviewers	Perform Review	Assess feedback	History		
Reference Sets	Status	Deadline	Enter Search String			Search	Search Options	3 Matches found. 3 in refs	et.
my first refset Viruses	Released Authoring	10 days 10 days	Search Results	Sct ld 19030005 36115006 89293008		deficiency virus deficiency virus type 2 deficiency virus type 1	2		
			Synonyms						
Add Review Define	Refresh Retire	Delete For Release Logout]	Browse					

• These can be displayed either in a list view (as above) or in a taxonomy. Highlight the second row in the list view before clicking on the 'Tree View' button.

			TSDO' from organisati		
Filters All refsets	→ All S	itatuses 👻	Definition Design A	ssign Reviewers Perform Review Assess feedback History	
Reference Sets	Status	Deadline	Enter Search String	Search Search Options 3 Matches found.	
my first refset	Released	10 days	Search Results	- Organism	
Viruses	Authoring	10 days	List View	È- Microorganism	
				⊟ Virus	
				RNA virus	
				Enveloped ssRNA virus with a DNA step in life-cycle	
				È- Family Retroviridae È- Genus Lentivirus	
				ia. ⊂enus Lentivirus ia. Primate lentivirus group	
				Human immunodeficiency virus	
				- Human immunodeficiency virus type 2	
				Human immunodeficiency virus type I	
			Synonyms	Human immunodeficiency virus type 2 (organism) HIV-2	
				Human immunodeficiency virus type 2	
				HIV2 - Human immunodeficiency virus type 2	
Add	Refresh	Delete			
Review	Retire	For Release		Browse	
Define	ſ	Logout			

- Note that the taxonomy auto-expands to show the concept that was highlighted in the list view.
- Also note that the currently selected concept's descriptions are shown in the Synonyms window.
- Now select the 'Browse' button to shown a graphical representation of the currently selected concept:



- This view shows the selected concept in the middle of the screen, its parents above, its children below, relationships from other concepts to it on the left and its relationships to other concepts on the right. The concepts above and to the right therefore define the concept that's in focus; and the concepts to the left and below are ones that are defined using this concept.
- Clicking on another concept within this view will switch that concept to be the current 'infocus' concept, and show its relationships to other SNOMED CT concepts. The browser can be used to investigate any concepts in the vicinity of a concept of interest.
- The arrow keys (with or without the SHIFT-key accelerator) can be used to scroll through child and parent concepts and relationships; a scrolling demo can also be started, by hitting the TAB key.
- Now close the graphical browser and display the reference set members in list view

Filters All refsets	•	All Statuses 🛛 👻	Definition Design A	ssign Reviewers	Perform Review	Assess feedback	History		
Reference Sets	Status	Deadline	Enter Search String			Search	Search Options	3 Matches found.	
my first refset	Releas		Search Results	Sct Id	Description				
Viruses Authoring 10 days		Tree View	19030005 36115006 89293008	19030005 Human immunodeficiency virus 36115006 Human immunodeficiency virus type 2					
	Refresh Retire	Delete For Release	Synonyms	Browse					

• Enter '1' in the 'Search String' field and click the 'Search' button. This will limit the view to only those reference set members containing '1' in their description:

Filters All refsets	→ All S	Statuses 🗸 🗸	Definition Design A	ssign Reviewers	Perform Review	Assess feedback	History		
Reference Sets	Status	Deadline	Enter Search String	1		Search	Search Options	1 Matches found.	
my first refset	Released	10 days	Search Results	Sct Id	Description				
Viruses	Authoring	10 days	Tree View	89293008	-	deficiency virus type I			
Add	Refresh	Delete	Synonyms						
Review	Retire	For Release		Browse					

• Switching to 'Tree View' will also limit the view to only those reference set members matching the search criteria:

🖳 Refset Maintenance	- logged in	n as 'Admin IH'	ISDO' from organisation 'Il	ISDO'.				
Filters All refsets	→ All S	Statuses 👻	Definition Design Assign	Reviewers Perform Review	Assess feedback	History		
Reference Sets	Status	Deadline	Enter Search String 1		Search	Search Options	1 Matches found.	
my first refset	Released	10 days	Search Results	rganism				
Viruses	Authoring	10 days	List View	ganism] Microorganism				
				RNA virus				
					NA virus with a DNA st	ep in life-cycle		
				i⊒- Family Retro i⊒- Genus L				
					.entivirus ate lentivirus group			
					Human immunodeficier	ncv virus		
				_	ⁱ Human immunodef			
				1				
				Lentivirus Lentivirus (organism)				
				,				
Add Re	fresh	Delete						
		5.01	_					
Review	etire	For Release	В	wse				
Define	[Logout						
	t		1					I

- Note the different colours used here
 - o Blue is used for matching members of the reference set
 - o Grey is used for ancestors of matching members
 - Purple is used for ancestors of matching members that are members of the reference set in their own right (but that do not match the search string).
- Now clear the 'Enter Search String' field and click on the 'Search Options' button.

🖳 SearchOptions		
Control Update results only when reque Update while typing	ested Maximum re Mimimum string length be	esults to show 2000 efore updating 3
Selection Match on start of words only Match anywhere in text	Case Matching Don't match on case Match on case Match case for words including capitals 	Token Matching Image: Match all words Image: Match any words Image: Match majority of words
Sorting Don't sort results Sort results on length Display Preferred Term Fully Specified Name Use matching term first	Layout of results Flat list only Tree structure Tree with 3 top levels shown Tree with all levels shown Include hierarchies outside refset	 Link into hierarchy Concepts linked at one position Concepts linked at all positions

- This screen is used to control the way that searching is performed particularly useful when reference sets with large numbers of members are being reviewed.
- Select the 'Include hierarchies outside refset' option under 'Layout of Results', save the options, and select the 'List View' button in the main window.
- Type 'virus' in the 'Search String' field. Note that the search window starts to show results as soon as three characters have been entered.

en P	Refset Maintenance	- logged ir	n as 'Admin IH	TSDO' from organisati	on 'IHTSDO'.					
Filte	ers All refsets	→ AII :	Statuses 👻	Definition Design A	ssign Reviewers	Perform Review	Assess feedback	History		
R	eference Sets	Status	Deadline	Enter Search String	virus		Search	Search Options	2227 Matches found.	I
	y first refset ruses	Released Authoring	10 days 10 days	Search Results	Sct Id	Description				•
	luses	Authoning	iu days	Tree View	10201000 10215003 102455002 103007 103093008 103105009 103107001 103406000 103407009 103408004	Squirrel fibroma HIV p24 antigen Epstein-Barr viru	ruminants virus ephroso-nephritis virus is early antigen is nuclear antigen ory A1 ory A2			÷
		efresh (Delete For Release Logout	Synonyms	Browse					

• Note that 2,227 matching SNOMED CT concepts have been found - and that these *are* concepts, and not descriptions. Descriptions for each of these concepts are displayed in the 'Synonyms' window.

• Select 'HIV p24 Antigen' and select the 'Tree View' button to display this in the taxonomy view:

🖳 Refset Mainten	ance - logged ir	n as 'Admin IH	TSDO' from organisati	ion 'IHTSDO'.	- • ×
Filters All refsets	✓ All:	Statuses 👻	Definition Design As	Assign Reviewers Perform Review Assess feedback History	
Reference Sets	Status	Deadline	Enter Search String	virus Search Search Options 2227 Matches found.	
my first refset	Released	10 days	Search Results	Human T-lymphotrophic virus, type I protein antigen 36	
Viruses	Authoring	10 days	List View		
			List view	Human T-lymphotophic virus, type I protein antigen 32	
				- Human T-lymphotrophic virus, type I protein antigen 28	
				···· Varicella-zoster virus antigen	
				⊞. Influenza virus antigen	
				⊕ Herpes simplex virus antigen	_
				Epstein-Barr virus nuclear antigen	=
				Epstein-Barr virus early antigen HIV p24 antigen	
				Venezuelan equine encephalomvelitis virus antigen	-
			Synonyms	HIV p24 antigen (substance)	
			-,,	Human immunodeficiency virus p24 antigen (substance)	
				Human immunodeficiency virus (HIV) p24 antigen Human immunodeficiency virus (HIV) p24 antigen (substance)	
				Human immunodericiency virus p24 antigen	
				HIV p24 antigen	
Add	Refresh	Delete			I
					I
Review	Retire	For Release		Browse	
Define		Logout			

- Note that the taxonomy view is expanded to show the 'HIV p24 antigen' concept.
- Now further refine the search by adding text to the search string to make 'virus swine'. Note the search results have been reduced to 10.

ilters All refsets		I Statuses 🛛 👻	Definition Design /	Assign Reviewers	Perform Review	Assess feedback	History		
Reference Sets	Status	Deadline	Enter Search String	virus swine		Search	Search Options	10 Matches found.	
my first refset	Released	10 days	Search Results	Sct Id	Description				
Viruses .	Authoring	g 10 days	Tree View	16718007 31806000 39480001 428771000 444426005 62408001 78639002 79386001 80154000 81970008	Vesicular exanth African swine few Suipoxvirus Swine influenza Exposure to Influ Human coxsacki Swinepox virus Hog cholera viru	virus vaccine ienza A virus subtype ievirus B5 is iema of swine virus			
	Refresh	Delete For Release	Synonyms	Human coxsackie Swine vesicular di Human coxsackie Browse					

• The search string can be used to match for partial words or SctIds, so entering 'vir swin exp' (as short for swine influenza virus exposure) would result in one match:

	• M •	Statuses 🔻 🔻	Definition Design A	ssign Reviewers	Perform Review	Assess feedback	History		
Reference Sets	Status	Deadline	Enter Search String	vir swi exp		Search	Search Options	1 Matches found.	
ny first refset	Released	10 days	Search Results	Sct Id	Description				
liruses	Authoring	10 days	Tree View	444426005		uenza A virus subtyp	a H1N1		
				444420000	Exposure to min				
			Synonyms	Exposure to swine	influenza virus				
			-,,	Exposure to Influe	nza A virus subtype				
				Exposure to Influe	nza A virus subtype	H1N1 (event)			
]	L					
	Refresh	Delete							
Add	Honoan		1						

• And entering '82272' would find a common cold.

				ITSDO' from organisat						
Filters	All refsets	→ All S	Statuses 🔻	Definition Design A	Assign Reviewers	Perform Review	Assess feedback	History		
Refere	nce Sets	Status	Deadline	Enter Search String	82272		Search	Search Options	1 Matches found.	
my first		Released	10 days	Search Results	Sct Id	Description				
Viruses	S	Authoring	10 days	Tree View	82272006	Common cold				
				Synonyms	Common cold (dise Cold Acute infective thi Head cold Infective nasopharyn Infective thinitis	nitis ryngitis				4
Ac Rev Def	iew	Refresh (Delete For Release Logout		Browse					

 Note that not all of the search options are relevant when 'including hierarchies outside the refset'.

5. Reference Set Chaining

This section describes how the members of one reference set can be included as members in another reference set. This chaining of reference sets together creates a number of dependencies between the reference sets. The Workbench utilities ensure that all reference sets are computed in the right order, and that any dependency cycles are detected as errors and reported.

• Add a new reference set 'More viruses' with a Refset Id or '120005', click the 'Save' button, then the 'Author' button and in the 'Design' window, right click and select MembersOf(NamedRefset).

Filters All refsets	→ AI S	itatuses 🛛 👻	Definition Design Assign Reviewers Perform Review Assess feedback History	
Reference Sets	Status	Deadline	MembersOf(NamedRefset)	
my first refset	Released	10 days		
Viruses more viruses	Authoring Authoring	10 days 10 days		
	rationing	io dajo		
			Compute Insert Help	
			Compute Insert Help Computed refsets	Туре
				Type dynamic
			Computed refsets	
			Computed refsets my first refset	dynamic
			Computed refsets my first refset	dynamic
			Computed refsets my first refset	dynamic
			Computed refsets my first refset	dynamic
Add	Refresh	Delete	Computed refsets my first refset	dynamic
Add Review		Delete For Release	Computed refsets my first refset	dynamic

• Now double click on 'NamedRefet' to select it (without selecting the brackets). Then select the 'Viruses' reference set in the 'Computed refsets' window in the bottom right of the window and then click on the 'Insert' button below that window.

Filters All refsets	•	All Statuses	Definition Design Assign Reviewers Perform Review Assess feedback History	
Reference Sets	Status	Deadline		
			MembersOf(Viruses)	
my first refset	Release			
Viruses	Authorin			
nore viruses	Authorin	ng 10 days		
			Compute Insert Help	
			Compute Insert Help	
			Compute Insert Help Computed refsets	Туре
				Type dynamic
			Computed refsets	dynamic
			Computed refsets my first refset	
			Computed refsets my first refset	dynamic
			Computed refsets my first refset	dynamic
			Computed refsets my first refset	dynamic
			Computed refsets my first refset	dynamic
Add	Refresh	Delete	Computed refsets my first refset	dynamic
			Computed refsets my first refset Viruses	dynamic
Add Review	Refresh Retire	Delete For Release	Computed refsets my first refset Viruses	dynamic

- This reference set now includes members of the 'Viruses' reference set.
- Now enter 'HIV virus' in the text field to the right of the 'Search for' button, click the 'Search for' button, expand the Substances hierarchy and 'Toggle In' the three concepts as shown.

🖳 Refset Maintenar	nce - logged in	as 'Admin IH	TSDO' from organisation 'IHTSDO'.	
Filters All refsets	→ AI S	itatuses 🛛 👻	Definition Design Assign Reviewers Perform Review Assess feedback History	
Reference Sets	Status	Deadline	MembersOf(Viruses)	
my first refset Viruses	Released Authoring	10 days 10 days		
more viruses	Authoring	10 days	Compute Insert Help	
			Biological substance Device antigen Device antidevice antigen Device antigen Device antigen Device ant	Type dynamic dynamic
Add	Refresh	Delete	Human immunodeficiency virus, type I glycoprotein antigen 120	
Review	Retire	For Release	Save Toggle In Search for HIV virus Insert	
Define		Logout	Cancel Toggle Out Insert Inclusions Browse	

• Click the 'Compute' button to review the results (remembering to reselect the 'Tree with all levels shown' option under 'Layout of Results' in the 'Search Options' screen).

Filters All refsets	→ All S	Statuses 👻	Definition Design A	ssign Reviewers	Perform Review	Assess feedback	History		
Reference Sets	Status	Deadline	Enter Search String			Search	Search Options	6 Matches found.	
my first refset Viruses more viruses	Released Authoring Authoring	10 days 10 days 10 days	Search Results	Set Id 19030005 36115006 89293008 115309002 115282005 115283000	Human immuno Human immuno Human immuno	deficiency virus type deficiency virus type deficiency virus, type deficiency virus, type			
			Synonyms	Organism Organism (organism	n)				
Add Review Define	Refresh Retire	Delete For Release		Browse					

It is also possible to import fixed reference sets (such as the non-human subset), for use in reference set specifications where this is necessary.

6. More complex Specifications

It's possible to develop quite complex specifications for reference sets pretty quickly using the draft IHTSDO Query syntax. An example is provided below:

- Add a new reference set called 'complex refset', give it a Refset Id '100028', and click the 'Author' button to start authoring.
- In the design window, right click and select 'Union(A, B, ..)'

- Double click on 'A'; then right click and select DescendantsAndSelf(a).
- Double click on 'a'; then enter 'viral disease' in the search field and click of the 'Search for' button.
- Expand the clinical findings hierarchy and select 'viral disease' as shown. Then click the 'Insert' button below the taxonomy window.

🖳 Refset Maintenar	ice - logged in	as 'Admin IH	TSDO' from organisation 'IHTSDO'.	
Filters All refsets	→ AI S	itatuses 🛛 👻	Definition Design Assign Reviewers Perform Review Assess feedback History	
Reference Sets	Status	Deadline	Union(DescendantsAndSelf(34014006 Viral disease), B)	
my first refset Viruses	Released Authoring	10 days 10 days		
more viruses Refset 4	Authoring Authoring	10 days		
Add	Refresh	Delete	Compute Insert Help	Type dynamic dynamic dynamic
Review		For Release	Save Toggle In Search for viral disease Insert	
Define	[Logout	Cancel Toggle Out Insert Inclusions Browse	

- Now double click on 'B' in the design window; then right click and select 'MembersOf(NamedRefset)'.
- Double click on 'NamedRefset' in the design window and select 'more viruses' in the 'Computed refsets' window in the bottom right of the screen. Then click the 'Insert' button under that window. The completed specification should look as below. If it doesn't you can either delete the text and start again, or manually edit the text.

ers All refsets	→ AII S	tatuses 🛛 👻	Definition Design Assign Reviewers Perform Review Assess feedback History
eference Sets	Status	Deadline	Union(DescendantsAndSelf(34014006 Viral disease), MembersOf(more viruses
y first refset iruses ore viruses lefset 4	Released Authoring Authoring Authoring	10 days 10 days 10 days	
			Compute Insert Help œ · Infectious disease œ · Non-human infectious disorder my first refset dynamic
			B- Infectious disease associated with acquired immune deficiency syndrome B- Acute infectious disease B- Infectious disease D- Infectious disease D- Infectious disease D- Viral disease D- Finding by site D- Procedure
Add	Refresh	Delete	B- Infectious disease B- Viral disease D- Viral disease D- Viral disease

• Now compute the reference set. There are 1,161 members this time.

Reference Sets	.						k History	
	Status	Deadline	Enter Search String			Search	Search Options	1161 Matches found, 1161 in refset.
my first refset	Released	10 days	Search Results	Sct Id	Description			*
/iruses	Authoring	10 days	Tree View	62479008	AIDS			
nore viruses	Authoring	10 days		36989005				
Refset 4	Authoring				Mumps			
				14168008	Rabies			
				38362002	Dengue			
				70090004	Cowpox			
				90268004	Catpox			
				14189004	Measles			
				20088003	Goatpox			
				33090006	Yabapox			
				36653000	Rubella –			-
			Synonyms					
]					
Add F	Refresh	Delete]					
Review	Retire	For Release		Browse				

- Switch to 'Tree View' and you should be able to identify the three sets of concept members that we designed independently and that are now included in this reference set.
- Switch back to 'List View' and enter 'mumps' in the 'Search String' field. 21 results are returned. Experiment with selecting concepts and switching between List and Tree views, remembering what the colours represent.

7. Releasing Multiple Reference Sets at one Time

This section covers how multiple reference sets can be released at one time.

- If you've been following the exercise, you should now have four reference sets, one with status 'Released' the others with status 'Authoring'.
- Mark the three unreleased reference sets as approved for release, by selecting each of them in turn and clicking first the 'For Release' button, and then the 'Approved' button.
- Now click the 'Release' button while one of the approved reference sets is highlighted.

ReleaseOptions			
Release Type	Final Release 🔻		
Release Date	29 September 2012		
Country	US		
Namespace	1234567		
Default Module Id	7654321		
Release Directory	C:\Users\John\Documents\Visual Studio 2005\	Projects\SCT Browser2\SCT Browser\SCT Browser\bin\Debug\release	e Change
Last Release Date	28 September 2012		
Release Filename		Last Filename	Status
der2_Refset_morev	esSnapshot_US1234567_20120929.txt rirusesSnapshot_US1234567_20120929.txt lexrefsetSnapshot_US1234567_20120929.txt		
Check Names	Test Release Final Release Close		

- The Workbench Utilities allow you to produce a test release (for checking purposes) before the final release is produced. On inspecting the release files, if corrections are required, the release can be suspended (by clicking the 'Close' button). One or more reference sets may then be removed from the release (either permanently, or for correction before re-approval).
- Click on the 'Test Release' button. Note that the system will ensure that reference sets are computed in the right order, and that any cycles are detected and displayed as errors.
- The Status of all the reference sets should change to 'Released OK'.
- Go to the release folder and view the complex refset snapshot file that was produced. It should look like the following:

der2_Refset_complexrefsetSnapshot_US1234567_20120929 - Notepad		
File Edit Format View Help		
id effectiveTime active moduleId refsetId	referencedComponentId	
40540f19-ce24-44f3-b43f-62158defe4ec 20120929 1	7654321 1200028 10082001 Progressive rubella panencephalitis	<u>^</u>
836eecc4-46b5-4d44-8e2d-83feb7d6689b 20120929 1	7654321 1200028 1020003 Disease due to Nairovirus	E
bad3bec0-46ee-4fd2-b02f-3ff3155784af 20120929 1	7654321 1200028 10227000 Heretic infection of penis	
a5b8f3ca-2041-40ae-8beb-8f16d67b3b02 20120929 1	7654321 1200028 102455002 Haemorrhagic nephroso-nephritis	
5d072ec2-0979-4a6a-b988-c433b3e19d97 20120929 1	7654321 1200028 10295004 Chronic viral hepatitis	
4ebf1805-20c9-4bef-b88b-2688447a4bca 20120929 1	7654321 1200028 10491005 Herpes zoster with meningitis	
94589b43-cf7d-418c-9c35-91f4831c73c9 20120929 1	7654321 1200028 105630005 Disease due to Poxviridae	
fbec2e92-e249-4525-9598-8e6d988779e4 20120929 1	7654321 1200028 105631009 Disease due to Paramyxoviridae	
03b73da8-5c0c-49b6-ac82-f1a2024540ff 20120929 1	7634321 1200028 105632002 Disease due to Paramysoff Idae	
51c9373e-55fd-4a3e-9def-8635606adaaa 20120929 1	7634321 1200028 105633007 Disease due to Binyavi fute	
1b230009-08dc-4a53-a35d-d871de3381e6 20120929 1	7634321 1200028 105634001 Disease due to Reoviridae	
cf374740-4a22-4f73-b725-5c5a8a50f0c5 20120929 1	7634321 1200028 105635000 Disease due to Retroviridae	
513852b5-8a2b-48f7-bd7c-72c7cbea6f75 20120929 1	7634321 1200028 105636004 Disease of possible viral origin	
	7654321 1200028 10665004 Mumps pancreatitis	
	7654321 1200028 10698009 Herpes zoster iridocyclitis	
ce964f5c-1dfa-4c16-82dd-0e8e954ebb96 20120929 1	7654321 1200028 10809006 Parainfluenza virus laryngotracheitis	
c3a75364-779d-4a97-92f6-8d6df792345c 20120929 1	7654321 1200028 110271000 Disease due to Circoviridae	
51c66e91-a34c-496e-abbf-d5e6525f1a1b 20120929 1	7654321 1200028 110272007 Post-weaning multisystemic wasting syndrome	
f015e147-a69f-4f5b-b774-0e6312ffd0e4 20120929 1	7654321 1200028 110273002 Chicken anaemia virus infection	
52a4b6f1-9693-42d5-b87a-4766831bce94 20120929 1	7654321 1200028 110274008 Psittacine beak and feather virus infection	
Obe35228-951e-4d51-8eee-bf7cfc4c8533 20120929 1	7654321 1200028 110275009 Pigeon circovirus infection	
0786054c-bb7e-44a4-b49b-7b545c3e2351 20120929 1	7654321 1200028 1116000 Chronic aggressive type B viral hepatitis	
42638ced-1bb3-43f0-963a-189b5b0d17b2 20120929 1	7654321 1200028 111843007 Viral gastroenteritis	
62d981f1-13f6-423c-8ce7-72f85498f9a1 20120929 1	7654321 1200028 111849006 Adenoviral bronchitis	
9f3071aa-9d38-496c-9bf9-2afcf5dc7c4f 20120929 1	7654321 1200028 111850006 Adenoviral meningitis	
2a253757-fcf1-43bf-a451-f3e26c93fe1b 20120929 1	7654321 1200028 111851005 Subacute adenoviral encephalitis	
16518783-52bd-4db3-be0d-044cf436ff06 20120929 1	7654321 1200028 111852003 Vaccinia	
02c2a98e-3dae-4706-ba40-a3cd1bc31873 20120929 1	7654321 1200028 111853008 Herpes simplex without complication	
318c2ab2-3732-4795-857c-a57eb9389f19 20120929 1	7654321 1200028 111854002 Herpes simplex with complication	
c2060f6c-486e-4f03-9248-e83f253f6601 20120929 1	7654321 1200028 111856000 Herpes simplex otitis externa	
b9cf7d60-8b15-4f62-ac31-25ef7fed0819 20120929 1	7654321 1200028 111859007 Herpes zoster without complication	
54bce37a-97ea-4ab2-8082-3b417ad5c3a5 20120929 1	7654321 1200028 111861003 Herpes zoster with nervous system complication	
bf97bba3-9a98-4f7a-ba1d-61481981f39b 20120929 1	7654321 1200028 111864006 Chikungunya fever	
05ffe15f-86ab-45db-bba5-6fe5d435cc13 20120929 1	7654321 1200028 111865007 Disease due to Flavivirus	
dd1d4001-4927-426b-8af5-dfe30fad34a7 20120929 1	7654321 1200028 111866008 Bussuquara virus disease	
3011d7c6-2314-45d9-bf6d-60b062ac4cbf 20120929 1	7654321 1200028 111867004 Rubella without complication	
20938510-f9da-4bbc-b312-4351b21c1c70 20120929 1	7654321 1200028 111868009 Rubella infection of central nervous system	
5d47cded-e7a2-4a06-9b1d-d6c1f45a1fd6 20120929 1	7654321 1200028 111870000 Mumps without complication	
49bea655-1a9d-45ec-92fa-6e8b38066931 20120929 1	7654321 1200028 111872008 Post measles encephalitis	
409b3b11-cdcd-451b-826d-f7be19f33dc9 20120929 1	7654321 1200028 111873003 Measles without complication	
8614524b-f698-4eec-ab9e-5d902d86a291 20120929 1	7654321 1200028 111875005 Canine distemper	
0f585cb4-2603-4c8f-bfd5-b6dddf027263 20120929 1	7654321 1200028 111878007 Coxsackie meningitis	
bb4ced37-30f4-44a2-be82-7d59c74cd5e3 20120929 1	7654321 1200028 111879004 Viral hepatitis A without hepatic coma	
50ab940f-546b-4456-bf95-838bc369a9ce 20120929 1	7654321 1200028 111880001 Acute HIV infection	
f8f473b7-8eb0-46b1-9ff5-0dff6e65f879 20120929 1	7654321 1200028 111891008 Viral hepatitis B without hepatic coma	
d526f996-7799-47a6-8790-17c733e18ab7 20120929 1	7654321 1200028 111896003 Viral hepatitis without hepatic coma	
1b0e31ee-53a3-4dc6-9091-4587b6ccda9d 20120929 1	7654321 1200028 111897007 Acute necrotising encephalitis	
2e0ce180-b8d2-4308-9d79-e0c44d4b32ea 20120929 1	7654321 1200028 11332008 Mouse mammary tumour virus infection	
3ca68dce-85e1-4497-87d0-00de687451ce 20120929 1	7654321 1200028 115282005 Human immunodeficiency virus, type I glycoprotein antigen	120
539299e9-fb53-4ae7-a29b-90a1bb7197bf 20120929 1	7654321 1200028 115283000 Human immunodeficiency virus, type 1 glycoprotein antigen	160
053791bd-6fbc-4e8e-bf1a-cb2d2ebb5b14 20120929 1	7654321 1200028 115309002 Human immunodeficiency virus, type II protein antigen 41	

• Note that when producing test release files, the concept's Fully Specified Name is displayed at an additional field in each row – to aid checking.

- Producing a test release does not increment the version number of a reference set.
- Now click the 'Check Names' button, and note that all the rows turn red. This signifies that if a release is made, then existing release files (in this case the test files) will be overwritten.
- Assuming the files are okay, go ahead and click the 'Final Release' button and close the 'Release Options' form.
- Note that the status of all the reference sets are now 'Released' and the three reference sets that we've just created have a version number of '1.0', indicating that this is their first release.

8. Tracking History

A history of reference set changes is kept. This section shows how the reference set history can be reviewed.

- Highlight 'my first refset' in the left-hand reference set browser window, and select the 'History' tab at the top right of the window. There are three versions of this reference set the initial version that was authored (version 0.1), the version that was released the first time (version 1.0), and the version that was authored prior to the second release (version 1.1). Note that the currently active release (version 2.0) will not be shown in the history until a new version of the reference set is created.
- Now select the first line of the version history (version 0.1 of the reference set), and select the 'Details' tab below.

Refset Maintenand Filters All refsets	✓ All St	atuses 👻	Definitio	n Design As	sign Reviewers Perfor	m Revie	ew Assess feedba	ack History		
Reference Sets	Status	Deadline	Version	Desc	cription			Owner	Author	Date
my first refset Viruses more viruses complex refset	Released Released Released Released	10 days 10 days 10 days 10 days 10 days	0.1 1.0 1.1 Details Rev Last	Specification Refset Id Module Id Status iew deadline review date Release date Owner Author Version]	ack Description	Admin IHTSDO Admin IHTSDO Admin IHTSDO	Admin IHTSDO Admin IHTSDO Admin IHTSDO Admin IHTSDO	

- Each of the tabs shows a different aspect of the history. Note that a history of the specification and manual inclusions and exclusions is kept, but not a history of the reference set members themselves.
- In this reference set, the main change that we made was to add two inclusions and one exclusion after the first release. Therefore, you can see that version 1.0 does not have any inclusions:

Filters All refsets	→ AI S	itatuses 👻	Definition De	esign Assign Reviewers Perform Review Ass	ess feedback History		
Reference Sets	Status	Deadline	Version	Description	Owner	Author	Date
my first refset	Released	10 days	0.1		Admin IHTSDO	Admin IHTSDO	
Viruses	Released	10 days	1.0		Admin IHTSDO	Admin IHTSDO	
more viruses complex refset	Released Released	10 days 10 days	1.1		Admin IHTSDO	Admin IHTSDO	
			Details Spe Concepts	ecification Inclusions Exclusions Feedback		Identifier	
	Refresh	Delete					
	Refresh Maintain	Delete					

• But version 1.1 of the history has two inclusions:

Deadline 10 days 10 days 10 days 10 days	Version Description 0.1 1.0 1.1	Owner Admin IHTSDO Admin IHTSDO Admin IHTSDO	Author Admin IHTSDO Admin IHTSDO Admin IHTSDO	Date
10 days 10 days	1.0	Admin IHTSDO	Admin IHTSDO	
Delete	Concepts Kingdom Plantae Kingdom Animalia		Identifier 31006001 387961004	
	Delete	Kingdom Plantae Kingdom Animalia	Concepts Kingdom Plantae Kingdom Animalia Delete	Concepts Identifier Kingdom Plantae 31006001 Kingdom Animalia 387961004

9. Support for Roles, Organisations, Collaboration and Sharing

Four main roles are supported within the Workbench Utilities:

- Admin this role is responsible for managing the release process, but can also do anything the other roles can do.
- **Owner** this role is responsible for creating new reference sets, assigning authors and reviewers, and managing the reference set through the workflow process.
- **Staff** this role can view reference sets that are made available within an organisation, or on the Member Exchange.
- **Consumer** this role can view reference sets that are made available by a Member within their country, or on the Common Exchange.

In addition, the owner of a reference set can allocate two further roles to users on a per-reference set basis, as follows:

- Author this role is responsible for designing the reference set specification in the design window, including the definition of an expression to evaluate reference set members and any explicit inclusions and exclusions. It is also responsible for dealing with any feedback from the reviewers. A single user is designated as author of each reference set by the owner of that reference set, as part of its definition.
- **Reviewer** this role is responsible for providing feedback to the author of a reference set. Multiple reviewers can be assigned to a reference set by the owner or the author, prior to initiating a review of the reference set.

Note that roles are specified per organisation, and that multiple organisations may be hosted on a single platform, allowing collaboration during the authoring and review process, and easy sharing of reference set definitions and releases, both among Members and more widely. This section provides an introduction to roles and collaboration and sharing services within the Workbench Utilities.

- Click the 'Logout' button to log out of the Workbench utilities as the IHTSDO Administrator.
- Log in as 'Susan US owner'; password is 'Susan'.
- Note that no reference sets are currently visible to Susan. That's because the reference sets created by 'Admin IHTSDO' were marked with a 'Release Distribution' of 'Organisation only'.
- Click 'Add' to create a reference set called 'susans refset'. Set the author to 'Jim- US Consumer'.
- Set the 'Release Distribution' to 'Organisation and Consumers'. This will make the reference set available to all staff within the organisation, and all consumers associated with the organisation.
- Now click the 'Save' button, and then the 'Author' button to send the reference set for authoring.

ilters All refsets	-	All Statuses 🛛 👻	Definition Design Assign I	Reviewers Perform Review Assess feedback History
Reference Sets	Status	Deadline		
susans refset	Definir	ng 8 days	Name	susans refset
			Description	
			Description	
			Refset Id	NotSet
			Module Id	
			Status	Defining
			Review deadline	20 October 2012 -
			Last review date	
			Review Type	Collaborative Review 👻
			Release distribution	Organisation and Consumers 🔹
			Release date	
			Owner	Susan - US owner (US - NLM)
			Author	Jim - US consumer VUS - NLM)
Add	Refresh	Delete	Version	0.1
Author	Approved	Retire	Save Cano	vel

- Note that the 'Design' tab is grey and not red, indicating that Susan does not have access to the 'Design' tab. As owner, she can retire the reference set or take it back from authoring to further define it, but she cannot author it, as she's set Jim up to be the author.
- Now log out as Susan, log in as 'Jim US consumer' (password Jim), and select 'susans refset'.

ilters All refsets		VI Statuses 🛛 👻	Definition	Design Assign F	Reviewers	Perform Review	Assess feedback	History	
Reference Sets	Status	Deadline]						
susans refset	Authoring	g 8 days		Name	susans r	efset			
				Description					
				Description					
				Refset Id	NotSet				
				Module Id					
				Status	0.0				
					Authorin	g ober 2012 -			
				Review deadline Last review date	20 000	ober 2012 👻			
				Last review date Review Type	Collabor	rative Review			
				lease distribution		ation and Consumers			
			ne	Release date	Organisa	ation and consumers	Ť		
				Owner	Susan -	US owner	(US - NLM)		
]	Author	Jim - US	consumer 👻	(US - NLM)		
	Refresh			Version	0.1				
Review	or Release								
	0 10.0000								

- Note that as the author of this reference set, Jim has access to the Design tab and also to the Assign Reviewers tab. In addition, Jim can mark this reference set as ready for review (using the 'Review' button) or as ready for Release, using the 'For Release' button.
- Jim cannot re-define this reference set, or create another reference set, as he is not an owner.
- Now select the 'Assign Reviewers' tab and select 'Joe Staff'.

ilters All refsets	✓ AII S	Statuses 👻	Definition Design	Assign Reviewer	S Perfo	rm Review	Assess feedba	ack History	
Reference Sets	Status	Deadline	Filters	[All users	•			
nererence Sets	Authoring	8 days	Filters Reviewer Admin IHTSDO Susan - US owner Jim - US consumer Admin US Joe Staff Ian - UK owner Steve Consumer David - UK cons Admin UK Dion - AU owner	Organisation IHTSDO US - NLM US - NLM US - NLM US - NLM UK - UKTC UK - UKTC UK - UKTC UK - UKTC UK - UKTC	Status Active Active Active Active Active Active Active Active Active Active Active	Assigned N N N N N N N N N N	Reviewer Organisation Status Experience A lot of experience Availability Available no	UK - UKTC Active erience.	
Review	Refresh or Release	Logout	Assign						

- This screen allows an owner or author to assign other users to review a reference set when it is ready for review.
- Click the 'Assign' button to assign Joe as a reviewer. Also assign Steve and Dion as reviewers. Note that reviewers need not be in the same organisation as the reference set owner.
- Now change the Filer in the top middle of the screen from 'All Users' to 'Assigned Users'.

ilters All refsets	→ All S	Statuses 👻	Definition Design	Assign Review	ers Perfo	rm Review	Assess feedback History
Reference Sets	Status	Deadline	Filters		Assigned u	sers 👻	
susans refset	Authoring	8 days	Reviewer Joe Staff Steve Consumer Dion - AU owner	Organisation UK - UKTC UK - UKTC AU - NEHTA	Status Active Active Active	Assigned Y Y Y	Reviewer Dion - AU owner Organisation AU - NEHTA Status Active Experience Availability
	Refresh or Release	Logout	< Assign	111			

- Only users that have been assigned to review this reference set are now shown.
- Now switch to the 'Design' tab and enter the following specification for the reference set: DescendantsAndSelf(90000000000441003|SNOMED CT Model Component) - (*hint: use right-click for the function name and the 'Insert' button to insert a selected concept from the hierarchy*).

ilters All refsets	→ All S	Statuses 🔹 🔻	Definition Design Assign Reviewers Perform Review Assess feedback History	
Reference Sets	Status	Deadline	DescendantsAndSelf(900000000000441003 SNOMED CT Model Compo	nent)
susans refset	Authoring	8 days		
			Compute Comment Help	De
	Refresh		Phamaceutical / biologic product Special concept Observable entity Qualifier value Physical force Physical force Procedure	
Review	or Release		Save Toggle In Search for Insert	

• Login as Susan again, and create two more reference sets:

0

o 'for members' – with a 'Release Distribution' of 'Members Exchange'

'for all' – with a 'Release Distribution'	of 'Common Exchange'
---	----------------------

🖳 Refset	Maintenance	- logged in		S owner' from organisation 'l		
Filters /	All refsets	→ All S	itatuses 👻	Definition Design Assign F	Reviewers Perform Review Assess feedback History	
Referen	ce Sets	Status	Deadline			
susans r	refset	Authoring	8 days	Name	for members	
for mem	bers	Defining	10 days			
for all		Defining	10 days	Description		
				Refset Id	NotSet	
				Module Id		
				Status	Defining	
				Review deadline	22 October 2012 -	
				Last review date		
				Review Type	Collaborative Review -	
				Release distribution	Member Exchange 👻	
				Release date		
				Owner	Susan - US owner (US - NLM)	
				Author	Susan - US owner v (US - NLM)	
Add	l Re	fresh	Delete	Version	0.1	
Autho	or App	roved	Retire	Save Canc	el	
			Logout			

• Now login as Jim again and select the 'for all' reference set.

🖳 Refset Maintenand	ce - logged in	as 'Jim - US o	consumer' from organisation	'US - NLM'.	
Filters All refsets	→ AI S	itatuses 🛛 👻	Definition Design Assign	Reviewers Perform Review Assess feedback History	
Reference Sets	Status	Deadline			
susans refset	Authoring	8 days	Name	for all	
for all	Defining	10 days			
			Description		
			Refset Id	NotSet	
			Module Id		
			Status	Defining	
			Review deadline	22 October 2012 -	
			Last review date		
			Review Type	Collaborative Review 👻	
			Release distribution	Common Exchange 👻	
			Release date		
			Owner	Susan - US owner (US - NLM)	
			Author	Susan - US owner v (US - NLM)	
	Refresh		Version	0.1	
		Logout)		

- Note that Jim only has access to two reference sets:
 - 'susans refset' because it has a 'Release Distribution' of 'Organisation and Consumers' and Jim is a Consumer of 'US-NLM'; and
 - 'for all' because it has a 'Release Distribution' or 'Common Exchange', and so is available to all users registered on the system.
- Jim doesn't have access to the 'for members' reference set as that has a 'Release Distribution' or 'Members Exchange', meaning that it is only available to users registered as staff within a Member organisation registered on the system.

• Now experiment with the 'Filters' at the top of the reference set browser in the top left of the screen. Note that there are two local reference sets, but only one reference set to be authored by Jim, and no reference sets assigned to Jim for review.

10. Reviewing Reference Sets

This section will walk you through the reference set review process.

- While logged in a Jim, select 'susans refset' and click the 'Review' button to mark this reference set as ready for review. If 'susans refset' isn't shown in the list, remember to check the filters.
- Note that all the tabs have now gone grey, and Jim can do nothing further with the reference set until control is returned to him.
- Now login as Susan, select 'susans refset' and select the 'Assign Reviewers' tab to confirm who is
 reviewing the reference set it should read as Joe, Steve and Dion. Now click on the 'Start
 Review' button to initiate the review of the reference set.
- Let's log in as Joe first (password 'Joe') and do his review. Select 'susans refset', and select the 'Perform Review' tab. The display shows that there are 1,480 members in this reference set.
- Expand the taxonomy to show all the children of Link Assertion, as shown:

			from organisation 'UK -		23
Filters All refsets	✓ All S	Statuses 👻	Definition Design As	sign Reviewers Perform Review Assess feedback History	
Reference Sets	Status	Deadline	Enter Search String	Search Search Options 1480 Matches found.	
susans refset	In Review	8 days	Search Results	SNOMED CT Model Component	
for members for all	Defining Defining	10 days 10 days	List View	F-Foundation metadata concept F-Foundation metadata concept F-Foundation metadata concept F-Foundation metadata concept F-Link assertion F-Link assertion Has problem name Has problem name Has problem name Has problem name Has support Is manifestation of	
				Has problem name Has problem name (link assertion)	
	Refresh	Logout	Comments	Browse Toggle Complete	

Let's assume that Joe doesn't think these concepts should be members of the reference set. To
provide this feedback, select the 'Link assertion' member row, enter a comment "Link assertion
and all its descendants should not be in metadata refset" into the 'Comments' field, and then
click the Toggle button to mark this member as suggested for removal from the reference set.
Note that members marked for removal are highlighted in red.

Filters All refsets	→ All S	tatuses 👻	Definition Design A	ssign Reviewers Perform Review Assess feedback History	
Reference Sets	Status	Deadline	Enter Search String	Search Search Options 1480 Matches found.	
susans refset for members for all	In Review Defining Defining	8 days 10 days 10 days	Search Results List View	SNOMED CT Model Component - Foundation metadata concept B- Reference set attribute B- Core metadata concept Core metadata concept Linkage concept - Linkage concept Has problem name Has problem name Has problem name Has ason Has support Is manifestation of	< <u> </u>
			Synonyms	Link assertion Link assertion (link assertion)	
F	Refresh	Logout	Comments	Link assertion and all its descendants should not be in metadata refset Browse Toggle Complete	

• Now select each of 'Link assertions' children in turn and click the 'Toggle' button for each one.

🖳 Refset Maintenance	- logged in	as 'Joe Staff'	from organisation 'UK	- UKTC'. [- • ×
Filters All refsets	→ All S	itatuses 👻	Definition Design As	ssign Reviewers Perform Review Assess feedback History	
Reference Sets	Status	Deadline	Enter Search String	Search Search Options 1480 Matches found.	
susans refset	In Review	8 days	Search Results	ti- Reference set	
for members	Defining	10 days	List View	Core metadata concept	
for all	Defining	10 days		Linkage concept	
				Link assertion	
				Has problem name	
				Has problem member	
				Has reason Has support	=
				Has explanation	
				Is aetiology for	
					-
			Synonyms	Is aetiology for	
				Is etiology for Is etiology for (link assertion)	
				lo cloby) for (init debolder)	
Re	efresh		Comments		
				Browse Toggle Complete	
	-				
		Logout			

- Note that any comments that you entered against a reference set member row will be redisplayed if that row is reselected.
- Let's assume that Joe also wants to suggest that the top level concept 'Record artifact' is also added to the reference set. To do this, click the 'Search Options' button and select 'Include hierarchies outside refset', under 'Layout of Results', before closing the 'Search Options' window.
- Now, highlight the 'Record artifact' row and click the 'Toggle' button.

🖳 Refset M	laintenance - log	ged in as	s 'Joe Staff' f	from organisation 'UK	- UKTC'.
Filters All r	refsets 👻	· All Stat	tuses 👻	Definition Design A	ssign Reviewers Perform Review Assess feedback History
Reference	Sets State	JS	Deadline	Enter Search String	Search Search Options Full SNOMED hierachy browse.
susans refs		eview	8 days	Search Results	Link assertion
for member		-	10 days	List View	- Has problem name
for all	Defir	ning	10 days		Has problem member
					Has reason
					Has support
					Is manifestation of
					Has explanation
					Record attifact
					The Organism
				Synonyms	Organism
					Organism (organism)
	Refresh			Comments	
					Browse Toggle Complete
			Logout		

- Note the different colours used. Blue indicates concepts in the reference set and black indicates concepts outside the reference set; red indicates concepts that Joe suggests should be removed from the reference set, and green indicates concepts that Joe suggests should be included in the reference set.
- Now click on the 'Complete' button to indicate that Joe has completed his review.
- Now login as Steve (password 'Steve'), highlight 'susans refset' and select the 'Assign Reviewers' tab. Note that although Steve cannot change the assigned reviewers -only the author and owner can do that he can see the other reviewers that have been assigned.
- Note that Steve's assignment line is highlighted in green as he has completed his review already.

🖶 Refset Maintenance	e - logged in	as 'Steve Con	sumer' from orga	nisation 'UK -	UKTC'.				
Filters All refsets	→ AI S	itatuses 👻	Definition Desig	n Assign Revie	ewers	Perform Review	Assess feedba	ack History	
Reference Sets	Status	Deadline	Filters		All use	ers 🔻			
susans refset for all	In Review Defining	8 days 10 days	Reviewer	US - NLM US - NLM UK - UKTC UK - UKTC UK - UKTC UK - UKTC UK - UKTC	Status Active Active Active Active Active Active Active Active	Assigned N N N Y N Y N Y	Organisation	Dion - AU owner AU - NEHTA Active	

• Select the 'Perform review' tab, select the 'List View' button, and type 'link assertion' into the 'Search String'.

• Toggle the eight concepts that were found out of the reference set.

🖶 Refs	et Maintenance	e - logged in	as 'Steve Cor	sumer' from organisa						
Filters	All refsets	→ AI S	tatuses 👻	Definition Design A	ssign Reviewers	Perform Review	Assess feedback	History		
Refere	ence Sets	Status	Deadline	Enter Search String	link assertion		Search	Search Options	8 Matches found.	
	s refset	In Review	8 days	Search Results	Sct Id	Desc	ription			
for all		Defining	10 days	Tree View	416083004 416271009 416586004 416698001 416872009 417151001 417318003 417569004	Has I Has I Has Link Is ae Has I Is ma	reason problem member problem name assertion tiology for explanation anifestation of support	1		
				Synonyms	Has support Has support (link as	ssertion)				
	R	efresh	Logout	Comments	Browse	Toggle	omplete			

- Now click the 'Tree View' button to see the concepts in the context of the SNOMED CT hierarchy. All the concepts are in one sub-hierarchy with 'Link assertion' at the top.
- Highlight the 'Link assertion' concept and type in a comment, as justification for removal of the sub-hierarchy from the reference set.

ters All refsets	→ All S	itatuses 🛛 👻	Definition Design /	Assign Reviewers Perform Review Assess feedback History	
Reference Sets	Status	Deadline	Enter Search String	link assertion Search Search Options 8 Matches found.	
usans refset	In Review	8 days	Search Results	SNOMED CT Model Component	
or all	Defining	10 days	List View	Link assertion Has problem name Has problem name Has problem name Has reason Has support Is manifestation of Has explanation Is aetiology for	
			Synonyms	Link assertion Link assertion (link assertion)	
	Refresh		Comments	All link assertions should be removed from the reference set	
				Browse Toggle Complete	

• Now select the 'Assess feedback' tab, and highlight the 'Link assertion' row.

✓ AII S	tatuses 🔻 🔻	Definition Design Assign Reviewers Perfor	m Review Assess feedba	ck Histor	TY .	
Status	Deadline	Suggested Inclusions and Exclusions	Decision	JStaff	SConsumer	
In Review	8 days	Has reason		Exclude	Exclude	
Defining	10 days	Has problem member		Exclude	Exclude	
		Has problem name		Exclude		
		Link assertion		Exclude	Exclude	
		Is aetiology for				
				Exclude	Exclude	
		Has support			Exclude	
		Comments				Reviewer
		Link assertion and all its descendants should not b	oe in metadata refset			Joe Staff
		All link assertions should be removed from the refe	rence set			Steve Consumer
Refresh		Justification				
	Status In Review Defining	Status Deadline In Review 8 days Defining 10 days	Status Deadline Suggested Inclusions and Exclusions In Review 8 days Has reason Defining 10 days Has problem name Link assertion Is aetiology for Has explanation Is manifestation of Has support Record attract Comments Link assertion and all its descendants should not be All link assertions should be removed from the reference	Status Deadline Suggested Inclusions and Exclusions Decision In Review 8 days Has reason Has reason Defining 10 days Has problem member Has problem name Link assertion Is aetiology for Has explanation Is manifestation of Has support Record attract Comments Link assertions should not be in metadata refset All link assertions should be removed from the reference set All link assertions should be removed from the reference set	Status Deadline Suggested Inclusions and Exclusions Decision JStaff In Review 8 days Has reason Exclude Defining 10 days Has problem member Exclude Has problem name Exclude Exclude Link assertion Exclude Exclude Is astiology for Has support Exclude Has support Exclude Exclude Record attfact Include Include Comments Link assertions should not be in metadata refset All link assertions should be removed from the reference set	Status Deadline Suggested Inclusions and Exclusions Decision J Staff Sconsumer In Review 8 days Has reason Exclude Exclude Exclude Defining 10 days Has problem member Exclude Exclude Exclude Has problem name Exclude Exclude Exclude Exclude Link assetion Exclude Exclude Exclude Is astiology for Exclude Exclude Exclude Has support Exclude Exclude Exclude Record attract Include Include Include

- Note that although Steve can't formally assess feedback using this tab, he can still see feedback from the other reviewers, together with his own feedback. This is because Susan set the 'Review Type' of the reference set in the 'Definition' tab to 'Collaborative Review'. If the 'Review Type' had been set to 'Blind Review', then reviewers would not be able to see each other's feedback in this way.
- Re-select the 'Perform Review' tab and click the 'Complete' button, indicating that Steve has completed his review.
- Now log in as Dion (password Dion), select 'susans refset', clear the 'Search String' field, and navigate down to the 'Linkage assertion' hierarchy in the taxonomy.
- Mark the children of 'Lank assertion' for exclusion, but leave the parent concept as is, and add a comment to this row: "Children should be removed, but parent should remain in refset".

Filters All refsets	→ AIIS	itatuses 🛛 👻	Definition Design A	issign Reviewers Perform Review Assess feedback History
Reference Sets	Status	Deadline	Enter Search String	Search Search Options Full SNOMED hierachy browse.
susans refset for members for all	In Review Defining Defining	8 days 10 days 10 days	Search Results	Foundation metadata concept Grow metadata concept Linkage concept Has problem name Has problem member Has reason Has support Is asticlogy for Br Attribute
			Synonyms	Link assertion Link assertion (ink assertion)
Add	Refresh		Comments	Children should be removed, but parent should remain in refset
	ſ	Logout	ı	Browse Toggle Complete

• Also toggle 'Record artifact' concept for inclusion in the reference set.

- Now log in as Susan again and select 'susans refset'.
- Select the 'Assign reviewers' tab and set the filter to 'Assigned users'

ters All refsets	👻 All S	tatuses 🛛 🔻	Definition Desig	In Assign Revie	ewers	Perform Review	Assess feedba	ack History	
Reference Sets	Status	Deadline	Filters		Assig	ned users	•		
usans refset	In Review	8 days	Reviewer	Organisation	Status	Assigned	Paulowar	Dion - AU owner	
or members or all	Defining Defining	10 days 10 days	Joe Staff Steve Consu	UK - UKTC UK - UKTC	Active Active	Y Y		AU - NEHTA	
			Dion - AU ow		Active	Y	Status	Active	
							Experience		
							Availability		
	Refresh Remind	Delete Extend]]						

- Note that Susan can see who has completed the review, and whose work is still outstanding. In this case, Dion has forgotten to mark the reference set review as complete, but Susan can see from the 'Assess feedback tab that he has provided some review feedback, so she may decide, after checking, to finish the review.
- To formally finish the review, click the 'Finish' button. Note that Susan may have also decided to extend the review and/or remind the reviewer team of the review deadline.
- Once Susan, as the owner, marks the review as complete, control of the reference set passes back to the author (Jim) to assess any feedback that has been provided.
- Now log in as Jim (password Jim), highlight 'susans refset' and select the 'Assess feedback' tab.

ters All refsets	•	All Statuses -	Definition Design Assign Reviewers Perform Re	eview Assess feedba	ck Histo	ry	
Reference Sets	Status	Deadline	Suggested Inclusions and Exclusions	Decision	JStaff	SConsumer	D-
usans refset	Assess	sing	Has reason		Exclude	Exclude	Exclude
or all	Definin	ig 10 days	Has problem member		Exclude	Exclude	Exclude
			Has problem name		Exclude	Exclude	Exclude
			Link assertion		Exclude	Exclude	
			Is aetiology for		Exclude	Exclude	Exclude
			Has explanation		Exclude	Exclude	Exclude
			Is manifestation of		Exclude	Exclude	Exclude
			Has support		Exclude	Exclude	Exclude
			Record artifact		Include		Include
			Comments Link assertion and all its descendants should not be in r				Reviewer Joe Staff
			Children should be removed, but parent should remain i				Dion - AU owner
			All link assertions should be removed from the reference	e set			Steve Consumer
[Refresh		Justfication				

• Now highlight the top row 'Has Reason' and work down the list, by clicking the 'Accept' or 'Reject' button for each suggestion. Note that the system will move on to the next suggestion automatically. Where there is a difference of views in the review team, the author may choose to enter a justification for the decision he makes.

Iters All refsets	→ AIIS	tatuses 🔻	Definition Design Assign Reviewers Perform Review	ew Assess feedbac	k Histo	ſy		
Reference Sets	Status	Deadline	Suggested Inclusions and Exclusions	Decision	JStaff	SConsumer	D-	
susans refset	Assessing		Has reason	Accept	Exclude	Exclude	Exclude	
or all	Defining	10 days	Has problem member	Accept	Exclude	Exclude	Exclude	
			Has problem name	Accept	Exclude	Exclude	Exclude	
			Link assertion	Reject	Exclude	Exclude		
			Is aetiology for	Accept	Exclude	Exclude	Exclude	
			Has explanation	Accept	Exclude	Exclude	Exclude	
			Is manifestation of	Accept	Exclude	Exclude	Exclude	
			Has support	Accept	Exclude	Exclude	Exclude	
			Record artifact	Reject	Include		Include	
			Comments				Reviewer	
	Refresh		Justification					
			Accept Reject					

- Once all the feedback has either been accepted or rejected, click the 'Apply' button to apply these changes automatically to the reference set.
- Select the 'Definition' tab and note that the version of the reference set has been incremented to 0.2. The version number is incremented by a minor number on each review cycle, and a major number for each formal release, so 1.3 implies the third review cycle following the first release.
- Now select the 'Design' tab and click the 'Inclusions' button, then the 'Exclusions' button, to show the explicit inclusions and exclusions that have been made to the reference set as a result of the review.

Iters All refsets	→ All S	Statuses 🔹 👻	Definition Design Assign Reviewers Perform	n Review Assess feedback History		
Reference Sets	Status	Deadline	DescendantsAndSelf(9000	0000000441003ISNOM		mpopent)
usans refset	Authoring		DescendantsAndSeil(5000	0000000441000 0110111		mponeny
or all	Defining	10 days				
				1		
			Compute Comment Help	Sct Identifier	Computed refsets	Type
			Concepts to explicitly exclude	Sct Identifier	Computed refsets	Туре
			Concepts to explicitly exclude Has reason	416083004	susans refset	dynamic
			Concepts to explicitly exclude Has reason Has problem member		·	
			Concepts to explicitly exclude Has reason Has problem member Has problem name	416083004 416271009	susans refset	dynamic
			Concepts to explicitly exclude Has reason Has problem member Has problem name Is aetiology for	416083004 416271009 416586004	susans refset	dynamic
			Concepts to explicitly exclude Has reason Has problem member Has problem name	416083004 416271009 416586004 416872009	susans refset	dynamic
	Refresh		Concepts to explicitly exclude Has reason Has problem member Has problem name Is aetiology for Has explanation	416083004 416271009 416586004 416872009 417151001	susans refset	dynamic

- After this review, the reference set can be released in the normal way.
- Alternatively, the reference set may be sent for any number of additional reviews (to the same review team or to a different review team) until it is ready for release.

--- ends ---